

Customer No. 24498
Attorney Docket No. PU030016 US
Office Action Date: January 11, 2008

Remarks/Arguments

In the non-final Office Action dated January 11, 2008, it is noted that claims 1-8 are pending; that claims 1-8 stand rejected under 35 U.S.C. §103; that the drawings filed on July 11, 2005 have been accepted; that the claim for domestic priority has been acknowledged; and that the Information Disclosure Statement submitted on July 11, 2005 has been considered and made of record.

By this response, claims 1, 2, 3, and 8 have been amended. Claims 1, 2, and 3 have been amended with editorial changes. Claim 8 has been amended to be dependent from claim 7. Claims 4-6 have been cancelled without prejudice. Claim 9 has been newly added and is based on the original disclosure. No new matter has been added to the claims by the present amendments.

Rejection Of Claims 1-7 Under 35 USC §103

Claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Myles in view of Crawford. Claims 4-6 have been cancelled. This rejection is respectfully traversed.

The present invention relates to a method and apparatus for providing improved timing synchronization between elements in a wireless system that are communicating digital video data. A beacon packet conveys timing information between a wireless access point and one or more wireless receiving stations. The timing information conveyed in the beacon packet includes an adjusted time base. The adjusted time base is related to the time base for the wireless system as adjusted by a relative time difference between one time stamp and a previous time stamp. The relative time difference is communicated to the wireless access point by, for example, a set top box that is receiving the digital video data from a network head end. In this way, the wireless receiving stations can use the adjusted time base to correct their respective data rates and, thereby, reduce the risk of overflowing or underflowing their buffer.

Claim 1 calls for:

An apparatus for wirelessly transmitting and receiving digital video data, comprising:

a means for receiving a time stamp indicating a time of a video transmission;

a means for determining a relative time difference between the time stamp and a previous time stamp;

a means for communicating the relative time difference to a transmitter having as one feature of transmission a time base;

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a means for the transmitter to adjust the time base according to the relative time difference.

Myles does not teach, show, or suggest any of “*a means for determining a relative time difference between the time stamp and a previous time stamp*” or “*a means for communicating the relative time difference to a transmitter having as one feature of transmission a time base*” or “*a means for the transmitter to adjust the time base according to the relative time difference,*” as defined in Applicants’ claim 1.

With respect to Applicants’ “means for determining,” Myles lacks any teaching of determining a relative time difference between the time stamp and a previous time stamp. The rejection attempts to draw its support in this regard from Myles at paragraph [0012], wherein Myles appears to discuss calculating an offset using, in part, the received time stamp. But the reliance on that passage of Myles or, for that matter, any other passage in Myles for the rejection of Applicants’ claims is misplaced. Myles’s offset is defined in paragraph [0042] as the difference between the received time stamp and the local time stamp, wherein the received time stamp is delivered in the time stamp field of the beacon packet and the local time stamp is generated “by taking a copy (in hardware) of the local free-running clock at a known receive reference point during reception of the [beacon] packet.” See also Figures 4A and 4B for depictions of the different offsets calculated by Myles. The local free-running clock is depicted in Figure 3 of Myles as part of the MAC element in the wireless access points or wireless stations. But the copy of the local free-running clock is not even remotely suggestive of the previous time stamp defined by Applicants in claim 1. As a result, Myles does not calculate his offset by using the received time stamp and a previous time stamp.

With respect to Applicants’ “means for communicating,” Myles lacks any teaching of communicating the relative time difference to a transmitter. Since Myles does not teach communicating the relative time difference to a transmitter, it follows logically that Myles cannot be said to teach Applicants’ “means for the transmitter to adjust the time base according to the relative time difference.” These points appear to be admitted on page 4 of the present Office Action. In view of the noted deficiencies in Myles, the present Office Action turns to Crawford for support of the rejection. But Crawford, as suggested for combination with Myles, fails to cure the deficiencies in Myles.

Crawford does not teach, show, or suggest a) the relative time difference, b) communicating the relative time difference to a transmitter, and c) adjusting the time base

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according to the relative time difference, all as defined in Applicants' claim 1. Instead, Crawford appears to be suggesting, especially in the cited and applied paragraph [0125] et seq., that the "RT's [remote transmitter's] time base should match the AP's [access point's] time base in order to achieve optimal tracking with the AP." Crawford then goes on to state that:

In optimizing communication, an RT utilizing the present invention attempts to match the frequency and time requirements of the AP when the RT sends a signal back to the AP. As such, the RT attempts to mimic the time base of the AP as if the RT had almost exactly the same time base as the AP. [Emphasis supplied].

But Crawford's "signal" that the remote transmitter sends back to the access point does not include and does not even suggest including a relative time difference. It is just a signal whose timing Crawford wants to have in synchronism with the timing at the access point. Nowhere does Crawford even suggest transmitting signals that include a relative time difference, based on time stamps, between the access point and the remote transmitters.

As a result, the combination of Crawford and Myles lack any teaching, showing, or suggestion of a relative time difference between the time stamp and the previous time stamp as defined in Applicants' claim 1. It then follows that, without the teaching of the Applicants' relative time difference, the combined references lack any teaching, showing, or suggestion of "communicating the relative time difference" and adjusting "the time base according to the relative time difference," as defined in claim 1. Thus, the combined references of Myles and Crawford fail to teach, show, or suggest all the elements in Applicants' claim 1.

Claims 2 and 3 are ultimately dependent from claim 1 and include all the limitations of the independent base claim. For all the reasons set forth above, it is submitted that the combined references of Myles and Crawford fail to teach, show, or suggest all the elements in Applicants' dependent claims 2 and 3.

Claim 7 is an independent method claim that includes substantially similar limitations to those found in claim 1, as discussed above. For all the reasons set forth above with respect to claim 1, it is submitted that the combined references of Myles and Crawford fail to teach, show, or suggest all the elements in Applicants' claim 7.

In light of the remarks above, it is believed that claims 1-3 and 7 would not have been obvious to a person skilled in the art upon a reading of Myles and Crawford, either

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separately or combination. Therefore it is submitted that claims 1, 2, 3, and 7 are allowable under 35 U.S.C. §103. Withdrawal of this rejection is respectfully requested.

Rejection Of Claim 8 Under 35 USC §103

Claim 8 stands rejected under 35 USC §103(a) as being unpatentable over del Prado Pavon in view of Mohindra. This rejection is respectfully traversed.

Claim 8 has been amended to be dependent from independent claim 7. The allowability of claim 7 has been discussed above with respect to the Crawford and Myles references.

The del Prado Pavon reference fails to cure the deficiencies in Crawford and Myles. del Prado Pavon appears to be related to clock synchronization in wireless networks. But del Prado Pavon does not a) determine a relative time difference between successive time stamps, b) communicate the relative time difference to a transmitter, and c) adjust the transmitter time base according to the relative difference, as defined in the base independent claim 7.

Mohindra also fails to cure the deficiencies in Crawford and Myles. Mohindra appears to be related to cancellation of DC offsets in a high speed communication system. Similar to del Prado Pavon, Mohindra does not even remotely suggest a) determining a relative time difference between successive time stamps, b) communicating the relative time difference to a transmitter, and c) adjusting the transmitter time base according to the relative difference, as defined in the base independent claim 7.

In light of the remarks above and for all the reasons given with respect to claims 1 and 7 above, it is believed that claim 8 would not have been obvious to a person skilled in the art upon a reading of del Prado Pavon and Mohindra, either separately or combination. Therefore it is submitted that claim 8 is allowable under 35 U.S.C. §103. Withdrawal of this rejection is respectfully requested.

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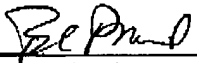
Conclusion

In view of the foregoing, it is respectfully submitted that all the claims pending in this patent application are in condition for allowance. Reconsideration and allowance of all the claims are respectfully solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner contact the Applicants' attorney at (609) 734-6815, so that a mutually convenient date and time for a telephonic interview may be scheduled for resolving such issues as expeditiously as possible.

In the event there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 07-0832.

Respectfully submitted,
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